

CLAIMS

What is claimed is:

1. A header for a heat exchanger, comprising:
 - a substantially planar base portion; and
 - a pair of step portions, the step portions being angled, following a straight or a curved segment, from the plane of the base portion, the header being provided with a plurality of substantially parallel slots spaced apart along the length of the header, each slot having an elongate section extending across the width of the base portion and end sections extending from the elongate section into the step portions of the header.
2. The header of claim 1, wherein the end sections each have a terminal end spaced apart from the plane of the base portion, thereby defining a separation distance.
3. The header of claim 2, wherein the separation distance is from about 2 mm to about 20 mm.
4. The header of claim 1, wherein the spacing between adjacent slots is between about 4 mm to 15 mm.
5. The header of claim 1, wherein the elongate section of the slots each have a length of about 3 mm to 85 mm.

6. The header of claim 1, wherein the end sections each have a length of about 2.5 mm to 28 mm.
7. The header of claim 1, further comprising an equal plurality of substantially flat tubes, each tube being inserted into a respective slot.
8. The header of claim 7, wherein each tube is brazed, soldered, or mechanically assembled to the respective slot.
9. The header of claim 8, wherein the juncture between each tube and the elongate section of a respective slot defines a transition line of deformation.
10. The header of claim 9, wherein the transition line of deformation is spaced apart from the highest stress concentrations.
11. The header of claim 10, wherein the highest stress concentrations occur on the tube at or near the location of the juncture between the terminal ends of the end sections and the tube.